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THE ROLE OF PLANNED INTERVENTIONS IN STUDYING THE DESISTANCE OF
CRIMINAL BEHAVIOR IN A LONGITUDINAL STUDY

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PREFACE

The Program on Human Development and Criminal Behavior at the Castine Research Corporation is a collaborative planning effort, involving approximately 30 individuals from a variety of academic and research disciplines. Its purpose is to advise the program's sponsors, the National Institute of Justice and the MacArthur Foundation, on the design of future longitudinal studies of criminal behavior.

This paper was prepared for the working group concerned with the continuation and desistance of criminal careers and deals with the role of planned experimental interventions designed to reduce future criminality in the context of a longitudinal study.

The paper begins by reviewing recent evidence regarding the effectiveness of rehabilitation interventions, describes the potential benefits and problems that a combined longitudinal/intervention study might produce, and describes an experimental intervention which the author believes offers the highest probability of producing positive results.



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CONTENTS

PREFACE	iii
TABLES	vii
Section	
I. INTRODUCTION	1
II. RECENT EVIDENCE ON THE EFFECTIVENESS OF CORRECTIONAL INTERVENTIONS?	2
III. WHY COMBINE INTERVENTION RESEARCH WITH A LONGITUDINAL STUDY?	6
The Need For Longitudinal Data And Large Sample Sizes In Evaluating Intervention Programs	6
Lack Of Support For Intervention Research From Other Sources	6
Opportunity To Exert Leverage Over Practitioners To Get Interesting Program Concepts Tested	7
Opportunity To Test Causal Theory	7
Making The Policy Relevance Of The Research Effort More Apparent	7
IV. PROBLEMS IN CARRYING OUT SUCCESSFUL INTERVENTION STUDIES	8
Selecting A Site With An Adequate Caseflow And Appropriate Control Conditions That Will Cooperate With The Experiment For The Time Period Required	8
Getting The Experimental Concepts Implemented In A Quality Program	9
Instrumentation And Data Collection	10
Maintaining Funding Support	10
V. WHAT TYPES OF INTERVENTION AT WHAT STAGE IN THE CAREER CYCLE MAKE THE MOST SENSE FOR THIS PARTICULAR EFFORT?	12
VI. CONTINUOUS CASE MANAGEMENT AND COMMUNITY TRACKING: A PROPOSED EXPERIMENTAL INTERVENTION	16
Theoretical And Conceptual Background	16
Program Design	18
Experimental Design	21
REFERENCES	22

TABLES

1. SCORING OF POTENTIAL INTERVENTIONS ON SELECTION CRITERIA	14
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I. INTRODUCTION

The purpose of this paper is to describe the reasons for including experimental interventions in longitudinal studies of the desistance of criminal behavior, the potential benefits that such combined longitudinal/intervention studies might produce, the problems that are likely to be confronted in conducting such studies, and some specific intervention strategies that have shown promise in previous studies and are appropriate for including in a Desistance Cohort design. Since many criminal justice researchers appear to still subscribe to the Martinson/NAS Rehabilitation Panel view that "there is no evidence that anything works," the paper begins with a brief review of the more recent evidence suggesting that, under certain conditions, some interventions do appear to work, with certain types of offenders.

II. RECENT EVIDENCE ON THE EFFECTIVENESS OF CORRECTIONAL INTERVENTIONS?

Criminal justice practitioners and researchers remain sharply divided over the question of whether correctional treatment programs can reduce the likelihood or extent of subsequent criminal behavior. This debate was brought into sharp focus by the publication of the late Robert Martinson's article "What Works? Questions and Answers About Prison Reform," (1974), and the more extensive publication from which it was drawn, a book by Lipton, Martinson, and Wilks (1975) describing the results of the authors' review of virtually all methodologically adequate studies published between 1945 and 1967. The conclusion of that study, as summarized by Martinson, was that "With few and isolated exceptions, the rehabilitative efforts that have been reported so far have had no appreciable effect on recidivism." This pronouncement came on the heels of similar conclusions that had been reported by Hood (1971), Bailey (1966), and Wilkins (1969), after their own reviews of many of the same or similar studies.

Although Martinson was later to profess more optimistic views regarding the prospects for effective treatment in a *Hofstra Law Review* article (Martinson, 1979), the basic conclusions of his study with Lipton and Wilks were confirmed by a special review panel created by the National Research Council (NRC), the applied research arm of the National Academy of Sciences (Sechrest, White, and Brown, 1979), and by several other reviews which followed shortly thereafter (Adams, 1975; Greenberg, 1977; Brody, 1976). The panel's report contained the following summary statements:

"The Panel concludes the Lipton, Martinson, and Wilks were reasonably accurate and fair in their appraisal of the rehabilitation literature" (p. 5)

"Within the limits noted below, the Panel concludes that Martinson and his associates were essentially correct. There is no body of evidence for any treatment or intervention with criminal offenders that can be relied upon to produce a decrease in recidivism. Where there are suggestions they are just that - suggestions. They prove to be elusive, not replicable, not quite statistically significant, working now with only one group, then only with another." (p. 31)

One of the severe deficiencies in the treatment evaluation literature, cited by the NRC Panel, in addition to the high rate of inadequate experimental designs, was the failure of many evaluators to adequately describe and document the characteristics of the treatment to which the experimental subjects were actually exposed. Detailed reexaminations of several widely reported experimental programs revealed substantial discrepancies between the treatment procedures that were supposed to have been tested and what actually took place (Gendreau and Ross, 1979; Sechrest, White, and Brown, 1979).

Lerman (1975) found that many of the experimental subjects in the California Youth Authority's Community Treatment Project were incarcerated during treatment for longer periods than the controls. In reviewing the Kassebaum et al. (1971) evaluation of group psychotherapy, Quay (1977) pointed out that the counselors were poorly trained and supervised non-professionals, many of whom did not believe themselves that the treatment would affect recidivism; that the group meetings were often superficial and poorly run; and that the group members did not regard the meetings as meaningful or the counselors as competent to conduct them.

In evaluating a contingency contracting program, Jesness et al. (1975) discovered that many field officers were not very successful in implementing the training they had received and that contracts were written for only 269 of 1,248 delinquents with identified problem behaviors. An evaluation of a volunteer program for juvenile probationers (Berger et al., 1975) found that from a quarter to a third of the probationers who were supposed to receive some service never did.

By and large, the conclusions of the Martinson, NRC and other reviews were widely accepted and had a predictably depressing effect on both research and practice. During the past decade there has been much less experimentation and research on new programs and a shift in emphasis from rehabilitation to incapacitation and punishment as the primary functions of correctional facilities (Cullen and Gilbert, 1982; Blumstein and Cohen, 1987). Given the paucity of high quality correctional research and the discouraging record compiled by programs during the preceding two decades it has been extremely difficult for proponents of any new treatment methods to be taken seriously.

However, two developments during the past decade have encouraged some observers to conclude that progress in identifying effective treatment methods is finally being made. One of these is the development of the procedure called meta-analysis (Glass, McGraw and Smith, 1981; Hunter, Schmidt and Jackson, 1982; Gendreau and Ross, 1987) which allows one to measure the magnitude of treatment effects observed in individual evaluations on a

standardized scale, so that treatment effects can be combined across individual studies and average effect sizes estimated for different types of treatments. The usual measure of effect size is the difference in outcome (recidivism rate, social adjustment, etc.) between the experimental and control programs, divided by the standard deviation of the controls.

The second development has been the observation of strong and consistent positive effects for some new forms of programming that appear to combine many of the most promising approaches of the past two decades—social learning, family therapy, and life skills training (Gendreau and Ross, 1979, 1987; Greenwood and Zimring, 1985; Rutter and Giller, 1983).

Several meta-analyses have examined the effectiveness of correctional programs and produced conflicting results. Garrett (1985) examined 126 studies of residential treatment programs for juveniles conducted between 1960 and 1983 and found an average effect size for recidivism, across all studies, of .13 in favor of the experimental programs. Among different treatment approaches, the highest effect size of .28 was found for programs emphasizing a life skills approach.

Davidson, Gottschalk, Gensheimer and Mayer (1987a) coded 91 evaluations of programs dealing with juvenile offenders that were published between 1968 and 1983 and *concluded that they could not reject the null hypothesis*. Since their sample included many non-residential programs, the median duration of treatment was only 14 weeks. They found that behavioral approaches produced the highest average effect size among different general intervention strategies, while group therapy and transactional analysis were more likely to produce negative effects. The professional training of investigators was also related to outcomes with psychologists and educators producing the largest effect sizes.

In their review of more recent evaluations, Gendreau and Ross (1987) identified several intervention strategies whose positive effects appeared to hold up over repeated testing: Davidson et al.'s, (1987a) intensive community supervision for juveniles, with services provided by well-trained and supervised, enthusiastic, college volunteers, and individually tailored intensive services for adult probationers (Andrews and Kiessling, 1980; Lee and Oiejnik, 1981); cognitive problem-solving therapies (Kazdin, 1985; Offord and Jones, 1983); parent training (Patterson, Chamberlain and Reid, 1982; Barton, Alexander, Waldron, Turner and Warburton, 1985); boot camps for younger offenders emphasizing hard but constructive labor (Thornton, Grayson, and Holloway, 1984) (Greenwood and Turner, 1987, also found positive results for a boot camp/outdoor survival type program); and therapeutic communities for drug abusers (DeLeon 1985, 1987).

In a sense, there is no real conflict between the more recent positive, but selective, findings of Gendreau and Ross (1987), and the more pessimistic conclusions of the NRC Panel (Sechrest et al., 1979) and the meta-analyses. Gendreau and Ross do not report on, nor do they claim to have reviewed, every evaluation pertaining to the strategies that they report as being effective. Instead they selectively report on those methods and investigators who have compiled a string of successful applications.

Neither the NRC Panel nor Martinson and his colleagues claimed that no treatment program had ever shown positive results; in fact many examples of positive programs were cited in their respective reports. Rather, their pessimistic conclusions regarding the lack of any proven strategy of intervention referred to the average results obtained over all the studies they had examined, which is what reasonable decisionmakers must expect to achieve unless they have some way of knowing how to improve their odds.

Two differing world views, regarding the complexity and inherent difficulties encountered in implementing realistic treatment programs for chronic offenders, underlie two different methods of reconciling the Martinson/NAS Panel and Gendreau and Ross conclusions. Those who believe that treatment programs are fairly simple to implement, and therefore fairly undifferentiated as to quality, as long as a sincere effort at implementation is made, are likely to side with the Martinson/NAS view. They would argue that Gendreau and Ross are simply identifying the lucky outliers which happen to turn up positive several times in a row.

Those who believe that treatment programs involve a complex set of difficult and demanding processes requiring a mix of diagnostic, supervisory, and didactic skills are likely to expect wide variations in program quality and therapeutic integrity, which are in turn somewhat explainable by the characteristics and procedures followed by the adopting organization in implementing and operating the model.

The true situation probably lies somewhere between these two extremes. Whether closer to one or the other we cannot now say.

III. WHY COMBINE INTERVENTION RESEARCH WITH A LONGITUDINAL STUDY?

THE NEED FOR LONGITUDINAL DATA AND LARGE SAMPLE SIZES IN EVALUATING INTERVENTION PROGRAMS

Any serious evaluation of a correctional intervention by necessity must involve a longitudinal design. The characteristics and behavior of experimental and control subjects must at a minimum be measured at some point before the intervention is applied (even with random assignment it is necessary to measure and correct or adjust for differences between the experimental and control samples that are due strictly to chance) and at some point following application, which provides a sufficient opportunity to observe differences in their resulting behavior.

One of the major problems with most of the previous evaluation studies is that they have involved relatively small sample size (less than 50), short follow-up periods (one or two years is typical), and limited outcome measures (often only arrests or events known to a parole officer) that were inadequate for detecting modest but potentially policy-relevant changes in behavior. Since modest changes in future prevalence or offending rates are all that now seems reasonable to expect, future evaluations must aim for larger sample sizes, longer follow-up periods, and multiple outcome measures (hopefully repeated over time) if they are not going to simply continue in the "null hypothesis" vein.

Unfortunately these "refinements" in evaluation methodology do not come cheap. The costs of repeated interviews (especially those conducted while the subject is at liberty in the community), official record coding, program monitoring, and analysis can easily exceed the cost of delivering the services. What this field requires are a few well chosen, well designed and executed studies. What it usually gets are cut-rate versions that confuse more than they clarify the issues.

LACK OF SUPPORT FOR INTERVENTION RESEARCH FROM OTHER SOURCES

All well and good you may say, but let the intervention researchers go find their own money pot; this here (Human Development) bundle is for "basic research." Unfortunately, the number of sizable money-pots for criminological/criminal justice research are pretty few and far between. During the past decade there have been only a limited number of experimental interventions funded by the U.S. Department of Justice's National Institute of Justice (NIJ) and Office of Juvenile Justice and Delinquency Prevention (OJJDP) (spousal

assault, deinstitutionalization, violent juvenile offender, Utah juvenile probation, private sector corrections, juvenile restitution and intensively supervised probation) and many of these have been hampered by financial and political limitations. Given the limited amount of funding for criminal justice research that will be available in the next few years, and the competing demands for its use, substantial advances in intervention research are not likely to be made unless they are included in this longitudinal effort.

OPPORTUNITY TO EXERT LEVERAGE OVER PRACTITIONERS TO GET INTERESTING PROGRAM CONCEPTS TESTED

One of the problems frequently faced by intervention researchers who do not control their own programs or agencies, is in getting the host agencies to carry out the experimental program in the way in which it was designed. While such compliance is frequently promised, as a condition of getting the funding to support the experimental program, after the grant has been awarded there is frequently a struggle between the goals of the researchers and the goals of the local practitioners. It is very likely that the benefits seen to be associated with involvement in a major longitudinal research effort will give the researchers greater leverage in securing the cooperation of local agencies.

OPPORTUNITY TO TEST CAUSAL THEORY

Ultimately, the best way of testing whether differential association, or better schools, or improved family social services leads to lower crime rates is with a planned experiment. The advances in understanding of social learning and family management achieved by the Oregon Social Learning Center provide a good example of how carefully designed experiments can contribute to advances in theory.

MAKING THE POLICY RELEVANCE OF THE RESEARCH EFFORT MORE APPARENT

In all likelihood, potential funding sources will be more impressed by research designs that hold out the promise of providing policy relevant findings. Experimental tests of potential interventions can make the strongest case for this type of outcome. The fact that the other cohorts are likely to involve interesting experimental interventions could have a negative effect on the likelihood of the "desistance cohort" getting funded if it does not also include such efforts.

IV. PROBLEMS IN CARRYING OUT SUCCESSFUL INTERVENTION STUDIES

SELECTING A SITE WITH AN ADEQUATE CASEFLOW AND APPROPRIATE CONTROL CONDITIONS THAT WILL COOPERATE WITH THE EXPERIMENT FOR THE TIME PERIOD REQUIRED

Many experimental programs have foundered for want of an adequate number of cases satisfying the characteristics for which the program was designed, OJJDP's Violent Juvenile Offender Program and some of the Bureau of Justice Assistance Intensive Supervision Probation ISP programs being recent examples. The selection of sites must include a careful evaluation of the volume and characteristics of arrestees and their disposition patterns. It is also necessary to make allowances for the discretionary screening that inevitably reduces the number of cases that will be eligible for random assignment. In a current evaluation of an ISP/prison diversion program in Marion County, Oregon, it turned out that the local screening committee screened out more than two-thirds of the eligible cases.

Since the effectiveness of any experimental program can only be measured in comparison to some specific control conditions it is essential to ensure that the control cases will not be receiving a treatment that is plausibly almost as effective as that received by the experimentals. This kind of contamination of the controls has been an issue in some recent drug use prevention programs where almost all juveniles are being exposed to some programming designed to teach them to "just say no."

Finally, it is easy to underestimate the disruption that an experimental program can introduce into the normal operations of a juvenile justice/correctional system, where change and natural evolution are the normal course of events. Involvement in an experimental study requires a certain commitment to stability in process and procedures for a period of several years that is often difficult to maintain in the face of changes on the Juvenile Court or among appointed and elected officials. Newly appointed or elected officials are likely to want to do "their thing" rather than live up to the commitments of their predecessors. In our (RAND's) evaluation of three private sector programs, the experiment in one site was disrupted by the appointment of a new Presiding Judge of the Juvenile Court with dramatically different views toward community programs than his predecessor. In another site the Director of the state's Department of Youth Services (DYS), who approved the program, was indicted and his replacement resigned after only serving one year. Stability of political support for experimental programs is not a trivial issue.

GETTING THE EXPERIMENTAL CONCEPTS IMPLEMENTED IN A QUALITY PROGRAM

Not everybody can run an effective correctional program. As experience shows, many cannot even get one off the ground. It has been my experience over the past five years in observing or reading about the implementation of innovative or experimental programs that involve substantial changes in the type of services being delivered, or in staff behavior, that less than half of the projects initiated actually succeeded in implementing anything like the program originally intended.

One of the major problems is program leadership. Just as the principal in a public school appears to play a critical role in determining the tone or atmosphere of the organizational culture, which in turn appears to impact the effectiveness of the programs, so the director of a correctional program plays a similar role. His or her critical functions appear to include: the selection, training, and continuous motivation of staff; monitoring and maintaining the quality of the program and directing its experimental evolution; and maintaining external support for the program among its diverse constituent base (judges, higher correctional authorities, professional colleagues, parents of residents, academics and researchers, politicians, etc.).

There appears to be no substitute for hands-on experience for developing and displaying the skills required to design, implement, manage and maintain a progressive correctional program that incorporates those concepts that are currently thought to be most effective in bringing about behavioral change. Unfortunately there are only a limited number of people who have had the appropriate experience and they tend to be clustered in the few states that have allowed such progressive programs to flourish. Furthermore, many of them are likely to be committed to pursuing program designs and models of their own choosing rather than somebody else's.

The main point of this discussion is that future attempts to develop and implement more effective correctional programs should devote more careful attention to the selection and grooming of potential program directors. Some techniques that might be utilized, in addition to careful screening on the basis of past performance and experience, include: Special training programs for new program directors on the pitfalls and proven techniques of implementing and managing innovative programs; "internships," "traineeships" or periods of "residency" in which potential new program directors would be placed in one or more operational programs, for short periods of time, to work alongside seasoned managers. It well may be the case that the theoretical bases behind some of our recently tested experimental programs have not been nearly as deficient as our ability to implement them

effectively. Any attempt to improve the quality of programs must confront this issue directly.

INSTRUMENTATION AND DATA COLLECTION

It goes without saying that any useful correctional evaluation must include appropriate and accurate measures of: (1) The characteristics and prior behaviors of its clients or residents, including their prior contacts with the juvenile/criminal justice system and involvement in previous therapeutic programs; (2) the content and character of programs to which each subject is exposed and the degree of exposure; and (3) the post-release behavior of clients in all those domains (criminal behavior, education, employment, social stability, etc.) expected to be affected by the program. The most troublesome areas in collecting such data in recent evaluations have been those of program content and quality and self-reported post-release behaviors.

The problems encountered in measuring program content and quality include lack of consistency in defining and describing therapeutic, supervisory, and social service activities (What exactly is a positive peer culture? How do you distinguish genuine "work experience programs" from simple exploitation of inmate labor or "guided group interaction" from simple group discussions?); and lack of objective standards or methods for assessing the quality of programs and services. Are all "Outward Bound" experiences the same or are some better than others? Does staff training and experience affect the quality of individual counseling, and if so, how does the improvement in quality become apparent?

The obvious problem encountered in measuring self-reported (the only real source for detailed accounts) post-release behaviors and attitudes is that of low response rates. No one who has attempted to obtain such self-reports with a corrections sample has achieved even a 50 percent response rate, with a clear bias toward underreporting among the most high-risk youth. Where parental permission is required for youths under 18 years of age, failure of the parents to make any response appears to be more of a problem than outright refusal.

MAINTAINING FUNDING SUPPORT

Everybody loves a winner. Nobody wants to go on funding an experimental program that has not attracted a lot of favorable attention. "If it is not clearly a winner, let's scrap it and try something new, even though we have only treated half the originally proposed sample." Many an experimental program has met an untimely demise because of just such reasoning. The problem is that without an adequate sample and complete treatment the results of the experiment are completely wasted. A true finding of "no effect" can be almost

as valuable as a finding of positive effects, if it helps clarify a theoretical point or eliminate a potential treatment method that some jurisdictions considered adopting. The Scared Straight evaluations did have positive effects even though the program did not. The problem of course is sticking to a well developed plan for testing treatment options and not jumping on the latest fad. For maintaining stability there is no substitute for clout, which a major effort, like a longitudinal study, can have.

V. WHAT TYPES OF INTERVENTION AT WHAT STAGE IN THE CAREER CYCLE MAKE THE MOST SENSE FOR THIS PARTICULAR EFFORT?

There are five basic criteria to be considered in deciding which particular intervention strategies should be tested in a longitudinal study of desistance:

1. Theoretical justification;
2. Empirical evidence;
3. Amount of difference from existing practice (controls);
4. Compatibility with the longitudinal design; and,
5. Political feasibility or practicality (How likely is it that the intervention would be adopted even if it proved to be effective?)

In an attempt to simplify the initial consideration of alternative interventions that might be tested as part of a longitudinal study, I have organized them into five basic categories, based on their timing in the development of the career. They are:

1. Early and consistent consequences for each offense, rather than the current practice of dismissing the first offenses or granting summary probation. Although not supported by any strong empirical studies (other than cross-site comparisons like Denmark vs. the Philadelphia Cohort) this approach is consistent with theories of deterrence, rational choice (Wilson and Herrnstein, 1985) and social learning. Consequences could include restitution, community service or loss of privileges. An operational model of such a system would be the Washington juvenile sentencing guidelines system which includes formalized diversion, with consequences meted out by a community board.

2. Early (therapeutic) intervention with high-risk youth, such as those with five or more arrests, or even earlier with the aid of multiple gate screening. This intervention would be an alternative to current forms of probation or short periods of detention and might include various forms of tracking, family or drug therapy, or special day programs on the order of those run by AMI (Associated Marine Institutes). The idea, which is supported by theories of social learning, differential opportunity and control theory, is to get to work on underlying problems before a pattern of criminal behavior is firmly established. This approach would require jurisdictions to invest resources in kids at a time in their careers that is currently being ignored.

3. *Community-based alternatives to residential placement, which would include most of the alternatives appropriate for category 2 above, the principal difference being stronger backup sanctions for non-compliance.* This overlap in programing (using the same approach to attempt to provide more assistance and structure for youths currently on probation and improved programming for kids currently being locked up) is the same as that which was attempted in Empey's Provo Project (Empey and Erickson, 1972). Although funding is currently available to support restrictive residential placements for such youth, the battle will involve convincing public officials and the general public to allow them to be treated in the community.

4. *Improved residential programs, which would emphasize treatment over custody and include community reintegration and continuous case management throughout all levels of program involvement.* Examples of appropriate models would include VisionQuest, Paint Creek Youth Center, and programs now under contract to the Massachusetts and Utah DYSS (Greenwood, 1988; Greenwood and Turner, 1987).

5. *Increased sanction severity and incapacitation such as waiver to adult court or increasing the length of time served in restrictive custody (as is now being done in California) for chronic offenders who fail to respond to earlier interventions.*

A summary scoring of each of these 5 options on the selection criteria described above is provided in Table 1.

Theoretical arguments (primarily social learning, differential opportunity, rational choice, and control) are strongest for early sanctions and community-based programs that attempt to rectify the inadequate family environment and poor social opportunities experienced by most chronically delinquent youth. Current theories are least helpful in deciding what approach to take with the deep-end older juveniles and adults.

The available empirical evidence is strongest for the early, community-based, intervention programs in category 2, particularly those involving family therapy and training, or close supervision and therapeutic assistance by young, well-trained and supervised community trackers or caseworkers.

Since most jurisdictions now invest little in the way of early sanctions or interventions, experimental programs in these areas would offer the greatest contrast to current practice. Studies of differences in sanction severity attributable to juvenile or adult status suggest that such legalistic approaches have little effect on sanction severity over the short run (Greenwood, Abrahamse, and Zimring, 1984; Hamparian, et al., 1982).

Table 1

SCORING OF POTENTIAL INTERVENTIONS ON SELECTION CRITERIA

INTERVENTION	(1=poor; 2=fair; 3=good)				
	CRITERIA				
	1	2	3	4	5
	THEORY	EVIDENCE	DIFFERENCE	COMPATIBILITY	FEASIBILITY
1. Early and consistent consequences.	3	1	3	3	1
2. Early intervention with high-risk groups	3	3	3	3	2
3. Alternatives to placement.	2	1	3	3	3
4. Residential programs.	1	1	2	2	3
5. Waiver to adult sanctions	1	1	1	1	1

With the exception of the last category, involving escalating sanctions, all of the intervention categories are about equally compatible with the requirements of a longitudinal design. The last category may be problematic if there are strong "equal protection/due process" arguments against assigning sanctions of differing severity on an experimental basis. On the other hand, since cross-site comparisons would probably be required, longitudinal data collected across sites that differed in this regard would be extremely helpful.

The feasibility scores are determined by the availability of funding, political tolerance for the concept, and the ability of the system to produce or sustain the desired intervention. The first two categories will suffer from lack of funding, while the last type of change is hard to produce.

On the basis of this summary analysis, programs falling within the second and third categories would appear to offer the greatest potential, with category one offering almost as much.

VI. CONTINUOUS CASE MANAGEMENT AND COMMUNITY TRACKING: A PROPOSED EXPERIMENTAL INTERVENTION

There are many different "promising" interventions that could fit the criteria listed in the previous section. This section describes a proposed intervention which combines some of the best features of a number of successful programs and is based on the author's own experience in designing and testing both residential and non-residential programs for delinquents. The basic approach involves continuous case management by a single individual or agency operating under a single, consistent conceptual approach; the availability of intensive supervision and assistance (two or more contacts per day) provided by well-trained, well-supervised and enthusiastic youthful "trackers," for those youths who reside in the community; and a heavy emphasis on resolving family/parental problems.

The next section reviews the theoretical background and support for this approach. The following two sections describe what the experimental program would look like in practice and how it could be evaluated in the context of a longitudinal study.

THEORETICAL AND CONCEPTUAL BACKGROUND

Most explanations of the causes of juvenile delinquency use an integrated theoretical perspective combining social control, social learning, social strain and labeling theories. According to this perspective, youths who become delinquent usually come from multiple-problem families, particularly low-income single-parent households, where parents have problems with drug or alcohol abuse or records of mental illness or criminality. The youths' early socialization experiences were often unsatisfactory and they may have learned deviant behavior from parents, peers or the social milieu. In turn, the youths' environment and subculture provide reinforcement for delinquent behavior. Social control and social strain theory add the proposition that youths who become delinquent lack social bonds, have low stakes in conformity, and may resort to aggression when they are unable to meet their expectations. While this integrated theoretical perspective is widely accepted, it fails to explain why some juveniles who are apparently successful in residential treatment relapse upon return to the community.

The cognitive behavioral approach adds a new dimension to the integrated perspective. Based upon social learning theory (Bandura, 1977) and problem behavior theory (Jessor and Jessor, 1977), this perspective posits that behavior is learned through processes of instruction, modeling, reinforcement, and shaping.

The concept of relapse prevention is based upon this cognitive behavioral approach, social learning theory, and Bandura's notion of self-efficacy (Marlatt and Gordon, 1985). This point of view sees addictive behavior as a means of coping with high-risk situations. Thus, to prevent relapse, individuals must learn new behavior patterns. Expectations of self-efficacy determine whether coping behavior is initiated (Bandura, 1977). A key element in relapse prevention is the development of realistic goals. Individuals who set immediate goals are more likely than those who set long-term goals to have higher self-efficacy and were able to perform tasks to achieve the desired goals (Bandura and Schunk, 1981). Through practice and reinforcement individuals develop strategies to avoid, or cope more effectively with, problematic situations. Success in different situations can boost self-efficacy and is generalizable to other areas.

The Relapse Prevention (RP) perspective holds that it is not sufficient to merely focus attention on eliminating the undesired behaviors (crime, drinking, drug use, smoking, overeating, etc.). Rather, a successful intervention program must help the client identify those "high risk" situations in which the undesired behavior is most likely to arise and either reduce the likelihood of their occurrence (the triggering situations) or develop and apply new coping mechanisms to deal with them. It breaks the acquisition and replacement process down into several discrete steps and makes allowances for (or is prepared to accept) temporary lapses or returns to prior negative behavior patterns.

RP theorists identify several stages in this process of behavioral change, (1) motivation, (2) acquisition of knowledge, (3) planning and rehearsal, and (4) testing and practice.

Motivation is normally the be-all/end-all of most other theories. In their view all it takes to get a delinquent to change is the right combination of appropriate role models, economic opportunities, community bonds, and threats of future sanctions. According to Relapse Prevention and social learning theorists motivation is a necessary, but not a sufficient condition for change. For the juvenile delinquent, motivation for change can come from some combination of dissatisfaction with his current situation, or how his life has been going in the past; peer pressure; threats; or desire to achieve future goals.

Once he is motivated, the next step in the RP process involves acquisition of knowledge about himself, his attitudes and behavior; the impact of his crimes on others; the "high-risk" situations that appear to trigger his negative behavior; and alternative means for dealing with them. Techniques that facilitate this process include:

- writing a self-history or keeping a daily journal;
- group or individual counseling; and
- traditional didactic instruction.

The third phase involves planning and rehearsing new coping skills or techniques for dealing with high-risk situations. Anger management, sex offender therapy, and drug resistance training are just some of the techniques currently in use. Others include observing people (modeling), role playing, and dry runs (for instance practicing how to respond to a friend who wants you to cut school and do drugs). These first three phases are normally accomplished under the strict supervision of the treatment program, and usually take place in a controlled and structured environment.

The last phase of practice and testing takes place out in the community and goes on literally forever. Since the temporary setback rate in all programs attempting to change addictive behavior is in the range of 70-90 percent, realistic programs must train their participants in ways to deal with such setbacks. A setback can be an indication of insufficient motivation, failure to identify or plan for particular high-risk situations, inadequate coping skills, or a failure to believe that the coping skills will work. Therefore, setbacks usually signify the need for additional motivation, training or controlled practice. RP practices draw on the concept of "self-efficacy," which predicts or measures the likelihood that a particular coping method will in fact be used. Self-efficacy theory holds that the likelihood of a particular coping skill being used by a particular individual, in a particular setting, depends on that individual's expectation that it will be successful. Successful use, in turn, increases the expectation of future success.

PROGRAM DESIGN

In order to test this intervention within the context of an on-going longitudinal study, let us assume that it would be implemented at the county level. An experimental Case Management Unit would be set up within the local Probation Department or a private agency. Youth would become eligible for assignment to Experimental or Control conditions following their first conviction in Juvenile Court, or following some subsequent conviction or penetration deeper into the system (such as first recommended out-of-home placement), if it was desirable to restrict the experiment to a more serious sample.

Experimental youth would be referred to the Case Management Unit (CMU) for a thorough "needs assessment," development of a "case plan," and advocacy at any subsequent court or dispositional hearing—assuming that the Court, Probation Department, state DYS, and parole authorities will continue to exercise their normal jurisdiction over the youth for the current offense and any subsequent offenses or violations of release conditions. The CMU is not designed to supplant the regular case disposition process. Rather, it is intended to supplement and assist the normal process by providing additional information and treatment resources. If the experiment is also intended to determine the benefits of providing additional resources, or types of programs not currently available, then the CMU and Experimental youth must be given access to such programs while they are denied to the Controls.

If the efforts of the CMU are going to prove beneficial, then the experimental site should be one that provides a continuum of intervention programs ranging from restitution and community service on the light end, through day programs, foster care, and a variety of small community-based residential placements, in addition to secure residential placements for the most serious offenders. The goal of the CMU will be to put together an individual program for each youth that makes the best use of the available resources within the dispositional framework provided by the normal court and correctional system procedures.

The theory behind the CMU is that of relapse prevention and social learning. Each offender's strengths, weaknesses, and responses to treatment will be different. The function of the CMU is to apply the concepts of social learning and relapse prevention to the overall management of each individual case; supplementing the regular system's short and haphazard memory (as reflected in case files); locating, cultivating and monitoring the quality of a wider variety of treatment options (as in the Juvenile Connections Project (Greenwood et al., 1983)) and buffering the system's desire for a quick fix.

Assuming that the CMU will be required to develop and present a new plan at each dispositional hearing (about once a year), and review the progress of all plans on a 90-day cycle, the cost of providing this service would run about \$1,000 per case per year. Each 90-day review would include face-to-face meetings with the youth, his family, and representatives from any programs in which he is involved (including school and work). Experimental youths would remain assigned to the CMU until they passed out of the jurisdiction of the Juvenile Court. This role is essentially that played by DYS case managers in Massachusetts, and it is similar to the role played by Jerry Miller's current organization, the National Center for Institutions and Alternatives (NCIA), on an individual case basis (Clark and Wallace, 1987).

The one intervention program that should be available to the Experimentals but not the Controls is intensive community supervision or "tracking" as it is called by the Massachusetts DYS. Tracking is an intensive form of community supervision involving several face-to-face contacts a day, curfew checks, and weekend recreational programming. Trackers are generally young college graduates with little or no prior experience but extensive training and ongoing supervision. While the CMU applies the principles of social learning and relapse prevention to case management decisions, the trackers apply these principles on a daily or even hourly basis, to keep the youth proceeding on a pro-social course.

Tracking can be used to replace any other form of community supervision (such as traditional probation, parole, or community mental health casework) and in Massachusetts is used for pre-trial release, diversion, post-adjudication supervision and aftercare following release from a residential placement. CMU case managers would be able to recommend "tracking" for the Experimentals, by itself or to support other forms of community treatment such as foster care, community service, or family therapy.

The other principal difference between programming for Experimentals and Controls would be a heavy emphasis on resolving family and parenting issues for the former. At a minimum, the CMU would provide close monitoring of family functioning and attempt to provide appropriate family counseling, mediation, or training in parenting skills as required. The trackers would be specifically trained to assist the youth and his family in resolving ongoing problems and to improve communications among family members along the lines of the Davidson et al., (1987b) and Barton et al., (1985) projects. It might also be desirable to set up a special family program to engage and assist families of high-risk youth.

In summary, Control youth would continue interacting with the Juvenile Justice system as they do now. Each new offense or violation would probably result in a more severe sanction or placement, and in a change from one correctional program to another. Intensive supervision would not be included among the intervention options that were available. The principal deficiencies of this system are its lack of continuity across treatment approaches and programs; limited assessment, case monitoring, and quality control capabilities; and its overreliance on residential placements in lieu of intensive supervision in the community.

Experimental youth would be monitored and assisted by a case manager from the CMU at every disciplinary or dispositional hearing following their assignment to the experimental condition, including such issues as school suspension or transfer to a

continuation school. The CMU case manager would take over or supplement the role of a concerned and informed parent. Experimental youth who continued to violate the law would be less likely than the Controls to be placed out of their homes due to the availability and capabilities of the "tracking" program, which can help assure compliance with any conditions of probation the court may require (curfew, school attendance, drug counseling, community service, etc.).

EXPERIMENTAL DESIGN

The chief experimental design issue is determining eligibility. I would suggest randomly assigning youth to Experimental or Control conditions following their first adjudication in Juvenile Court. Once the assignment is made, they must remain Experimentals or Controls until they pass the age jurisdiction of the Juvenile Court. In fact, it might be desirable to maintain the Experimental and Control conditions for some youth up to their 21st or later birthday, to determine whether such constructive programming can also be beneficial in reducing the recidivism rate of young adults.

Assuming that self-report and official record data would be collected periodically for all youth, as part of the longitudinal study, the only extra data collection required by this experimental intervention would be some effort to determine exactly what type of programming the Experimentals and Controls were exposed to. This could be done through observation, additional interviews with each youth, or interviews with their caseworkers.

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